Landing Statistics used to Standardize Trawling Effort by Vessel Horsepower for Pacific Cod *(Gadus Macrocephalus)* and its Principal Shelf Co-habitants, April-September 1960-81

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July 1984

LANDING STATISTICS USED TO STANDARDIZE TRAWLING EFFORT BY VESSEL HORSEPOWER FOR PACIFIC COD (*GADUS MACROCEPHALUS*) AND ITS PRINCIPAL SHELF CO-HABITANTS, APRIL-SEPTEMBER 1960-81

by

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ABSTRACT

Foucher, R. P., and S. J. Westrheim. 1984. Landing statistics used to standardize trawling effort by vessel horsepower for Pacific cod (Gadus macrocephalus) and its principal shelf co-habitants, April-September, 1960-81. Can. Data Rep. Fish. Aquat. Sci. 464: 34 p.

Detailed data used for the standardization of trawling effort for Pacific cod (Gadus macrocephalus) and its principal shelf co-habitants in Hecate Strait, Queen Charlotte Sound and off southwest Vancouver Island are presented. Results of the method (described elsewhere) which exhibit an increase in the standardized/nominal effort ratio for Pacific cod, rock sole and English sole from Two Peaks-Butterworth Ground are also given.

Key words: standardized trawl effort, shelf species, Pacific cod, English sole, lingcod, petrale sole, rock sole.

RÉSUMÉ

Foucher, R. P., and S. J. Westrheim. 1984. Landing statistics used to standardize trawling effort by vessel horsepower for Pacific cod (Gadus macrocephalus) and its principal shelf co-habitants, April-September, 1960-81. Can. Data Rep. Fish. Aquat. Sci. 464: 34 p.

Le présent rapport fournit des données détaillées, utilisées pour la normalisation de l'effort de chalutage de la morue du Pacifique (Gadus macrocephalus) et de ses principaux voisins peuplant la plate-forme du détroit d'Hécate, du détroit Reine-Charlotte et de la partie hauturière au sud-ouest de l'île vancouver. Il présente aussi les résultats de la méthode (décrite ailleurs) qui met en lumière une augmentation du taux effort normalisé/effort nominal pour la morue du Pacifique, la sole du Pacifique et la sole anglaise peuplant le pêcherie Two Peaks-Butterworth.

Mots-clés: effort normalisé de chalutage, espèces de la plate-forme, morue du Pacifique, sole anglaise, morue-lingue, plie de Californie, sole du Pacifique.

INTRODUCTION

The authors have submitted a report for publication which describes a method developed to standardize trawling effort for Pacific cod (Gadus macrocephalus) and its two major shelf co-habitants off southwest Vancouver Island (Area 3C-N), and in Queen Charlotte Sound (Areas 5A+5B) and Hecate Strait (Areas 5C+5D) (Fig. 1).

This report contains the tables of detailed records used in the development of the aforementioned method for standardizing effort. Also included are results for Pacific cod (included in above report) and rock sole and English sole from Two Peaks-Butterworth Ground.

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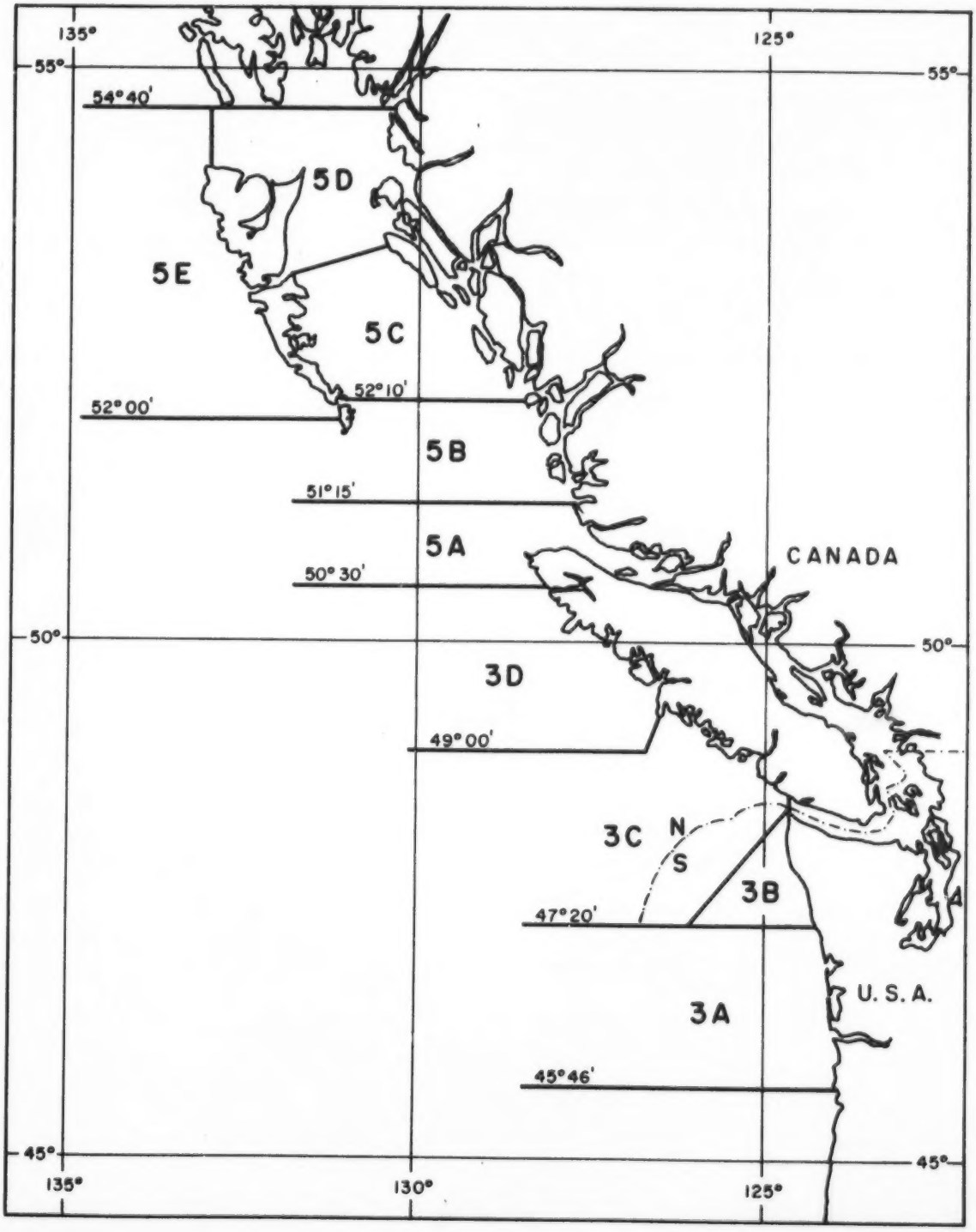

Fig. 1. Major statistical areas for Canadian groundfish statistics.

Table 1. Mean horsepower (HP), by tonnage class, for Canadian trawlers landing selected shelf species[a] from Area 3C-N during April-September, by five-year intervals, 1960-81.

Tonnage class		Year				
		60-64	65-69	70-74	75-79	80-81
1	HP	142	174	197	257	225
	(N)	(16)	(19)	(16)	(10)	(9)
2	HP	207	203	242	309	333
	(N)	(7)	(10)	(14)	(14)	(11)
3	HP	-	393	523	483	544
	(N)	(-)	(4)	(5)	(11)	(6)
4	HP	-	-	521	543	565
	(N)	(-)	(-)	(4)	(3)	(1)
5	HP	-	-	875	875	-
	(N)	(-)	(-)	(1)	(1)	(-)
6	HP	-	-	750	875	825
	(N)	(-)	(-)	(1)	(1)	(3)
7	HP	-	-	-	650	-
	(N)	(-)	(-)	(-)	(1)	(-)
8	HP	-	-	-	800	-
	(N)	(-)	(-)	(-)	(1)	(-)

[a]Pacific cod+lingcod+petrale sole.

Table 2. Mean horsepower (HP), by tonnage class, for Canadian trawlers landing selected shelf species[a] from Areas 5A+5B during April-September, by five-year intervals, 1965-81.

Tonnage class		Year			
		65-69	70-74	75-79	80-81
1	HP	181	195	210	225
	(N)	(24)	(11)	(2)	(3)
2	HP	231	258	322	375
	(N)	(16)	(12)	(17)	(12)
3	HP	388	473	460	492
	(N)	(9)	(4)	(9)	(7)
4	HP	447	517	608	593
	(N)	(3)	(5)	(6)	(2)
5	HP	-	-	-	790
	(N)	(-)	(-)	(-)	(2)
6	HP	750	750	825	825
	(N)	(1)	(3)	(3)	(3)
7	HP	-	650	825	850
	(N)	(-)	(1)	(3)	(1)
8	HP	-	-	-	-
	(N)	(-)	(-)	(-)	(-)
9	HP	-	-	1,125	1,125
	(N)	(-)	(-)	(1)	(1)
10	HP	-	-	800	-
	(N)	(-)	(-)	(1)	(-)

[a]Pacific cod+lingcod+rock sole.

Table 3. Mean horsepower (HP), by tonnage class, for Canadian trawlers landing selected shelf species[a] from Areas 5C+5D during April-September, by five-year intervals, 1960-81.

Tonnage class		Year				
		60-64	65-69	70-74	75-79	80-81
1	HP	128	173	224	207	230
	(N)	(16)	(21)	(10)	(6)	(1)
2	HP	208	248	284	337	346
	(N)	(15)	(27)	(21)	(23)	(15)
3	HP	279	388	445	519	534
	(N)	(5)	(9)	(5)	(10)	(7)
4	HP	400	502	542	615	645
	(N)	(1)	(5)	(6)	(4)	(5)
5	HP	-	-	875	778	790
	(N)	(-)	(-)	(1)	(3)	(2)
6	HP	-	750	753	828	863
	(N)	(-)	(1)	(3)	(3)	(2)
7	HP	-	-	650	825	-
	(N)	(-)	(-)	(1)	(3)	(-)
8	HP	-	-	-	765	765
	(N)	(-)	(-)	(-)	(1)	(1)
9	HP	-	-	-	-	780
	(N)	(-)	(-)	(-)	(-)	(1)

[a]Pacific cod+rock sole+English sole.

Table 4. Mean gross tonnage (GT), by horsepower class, of Canadian trawlers landing selected shelf species[a] from Area 3C-N during April-September, by five-year intervals, 1960-81.

HP class		Year				
		60-64	65-69	70-74	75-79	80-81
1	GT	35	38	-	-	-
	(N)	(5)	(3)	(-)	(-)	(-)
2	GT	39	44	44	53	35
	(N)	(10)	(13)	(12)	(3)	(3)
3	GT	45	52	48	50	49
	(N)	(6)	(11)	(15)	(11)	(8)
4	GT	59	68	70	78	70
	(N)	(2)	(4)	(5)	(11)	(8)
5	GT	-	-	145	104	113
	(N)	(-)	(-)	(3)	(6)	(3)
6	GT	-	132	171	158	128
	(N)	(-)	(2)	(2)	(4)	(3)
7	GT	-	-	160	196	147
	(N)	(-)	(-)	(2)	(3)	(1)
8	GT	-	-	190	115	190
	(N)	(-)	(-)	(2)	(1)	(2)
9	GT	-	-	-	305	273
	(N)	(-)	(-)	(-)	(3)	(2)

[a]Pacific cod+lingcod+petrale sole.

Table 5. Mean gross tonnage (GT), by horsepower class, of Canadian trawlers landing selected shelf species[a] from Areas 5A+5B during April-September, by five-year intervals, 1960-81.

HP class		Year			
		65-69	70-74	75-79	80-81
1	GT	38	-	-	-
	(N)	(2)	(-)	(-)	(-)
2	GT	46	47	52	48
	(N)	(17)	(8)	(3)	(1)
3	GT	59	49	58	44
	(N)	(17)	(11)	(5)	(3)
4	GT	88	80	88	87
	(N)	(11)	(5)	(9)	(8)
5	GT	166	145	105	108
	(N)	(1)	(3)	(8)	(6)
6	GT	143	174	156	134
	(N)	(3)	(3)	(5)	(4)
7	GT	129	227	228	190
	(N)	(1)	(4)	(3)	(1)
8	GT	265	265	199	217
	(N)	(1)	(1)	(3)	(3)
9	GT	-	285	328	274
	(N)	(-)	(1)	(4)	(4)
10	GT	-	-	380	421
	(N)	(-)	(-)	(2)	(1)

[a]Pacific cod+lingcod+rock sole.

Table 6. Mean gross tonnage (GT), by horsepower class, of Canadian trawlers landing selected shelf species[a] from Areas 5C+5D during April-September, 1960-81, by 5-year intervals.

HP class		Year				
		60-64	65-69	70-74	75-79	80-81
1	GT	39	49	-	-	-
	(N)	(4)	(2)	(-)	(-)	(-)
2	GT	47	46	48	47	-
	(N)	(19)	(17)	(6)	(4)	(-)
3	GT	87	66	59	63	74
	(N)	(8)	(20)	(13)	(7)	(4)
4	GT	85	88	77	79	76
	(N)	(5)	(15)	(14)	(15)	(11)
5	GT	166	166	150	103	103
	(N)	(1)	(1)	(4)	(8)	(4)
6	GT	-	149	174	149	146
	(N)	(-)	(4)	(2)	(5)	(6)
7	GT	-	160	218	247	181
	(N)	(-)	(2)	(5)	(2)	(1)
8	GT	-	265	265	220	276
	(N)	(-)	(1)	(-)	(7)	(6)
9	GT	-	-	243	265	261
	(N)	(-)	(-)	(2)	(4)	(3)
10	GT	-	-	-	338	-
	(N)	(-)	(-)	(-)	(1)	(-)

[a]Pacific cod+rock sole+English sole.

Table 7a. Pacific cod landings(t), by horsepower class, by year, from Two Peaks-Butterworth, option-2 depth intervals, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	-	33	-	-	5	-	5	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	44
2 (100-199)	91	289	229	49	291	84	347	14	37	18	14	55	-	-	-	-	55	-	2	5	-	-	1580
3 (200-299)	176	50	54	117	346	440	603	293	192	68	114	165	357	542	253	289	140	428	93	105	52	17	4894
4 (300-399)	114	-	18	222	616	480	746	225	147	373	97	134	228	292	169	50	73	36	36	202	33	71	4362
5 (400-499)	-	-	-	-	237	226	114	60	132	-	5	-	-	-	231	34	15	-	-	99	108	141	1402
6 (500-599)	-	-	-	-	-	-	94	-	6	30	-	-	-	-	3	25	24	76	85	210	119	256	928
7 (600-699)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280	256	58	106	-	38	41	12	791
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	434	268	670	97	396	368	247	2480
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	131	-	-	-	-	-	-	-	131
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	381	372	301	388	1495	1230	1909	592	515	489	230	354	585	834	1067	1088	633	1316	313	1055	721	744	16612

Table 7b. Pacific cod effort(h), by horsepower class, by year, from Two Peaks-Butterworth, option-2 depth intervals, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	-	60	-	-	35	-	36	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	141
2 (100-199)	297	573	399	233	200	105	317	15	49	89	291	274	-	-	-	-	153	-	28	49	-	-	3072
3 (200-299)	298	194	151	179	201	273	435	239	540	237	349	598	732	664	387	496	443	1116	531	388	251	130	8835
4 (300-399)	87	-	44	308	267	174	596	210	235	586	242	460	321	243	105	107	211	106	293	415	112	298	5420
5 (400-499)	-	-	-	-	58	51	81	45	146	-	28	-	-	-	104	36	116	-	-	219	201	354	1439
6 (500-599)	-	-	-	-	-	-	68	-	2	96	-	-	-	-	34	21	37	93	141	524	407	904	2327
7 (600-699)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	171	265	181	145	2	94	83	78	1019
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	323	305	1062	478	454	302	493	3417
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	-	10	-	-	-	-	-	64
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	682	827	594	720	761	603	1533	509	982	1008	910	1332	1053	907	855	1248	1456	2522	1473	2143	1356	2257	25731

Table 7c. Pacific cod LPUE(kg/h), by horsepower class, by year, from Two Peaks-Butterworth, option-2 depth intervals, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1 (0-99)	-	548	-	-	133	-	138	-	58	-	-	-	-	-	-	-	-	-	-	-	-	-
2 (100-199)	305	503	574	209	1455	800	1093	905	761	204	49	202	-	-	-	-	362	-	79	104	-	-
3 (200-299)	591	257	360	653	1719	1610	1385	1224	355	284	325	276	487	816	654	582	316	383	175	269	207	134
4 (300-399)	1309	-	418	719	2308	2758	1252	1071	627	636	402	292	709	1199	1614	470	346	344	123	485	292	237
5 (400-499)	-	-	-	-	4084	4426	1411	1323	902	-	164	-	-	-	2221	954	127	-	-	449	536	398
6 (500-599)	-	-	-	-	-	-	1389	-	3175	307	-	-	-	-	79	1196	646	814	603	401	292	283
7 (600-699)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1635	964	322	732	32	399	488	155
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1343	877	630	202	873	1219	501
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2417	-	36	-	-	-	-	-
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mean	559	450	507	539	1965	2040	1245	1163	524	485	253	266	556	920	1248	872	435	522	212	492	532	330

Table 7d. Pacific cod ALPUE, by horsepower class, by year, from Two Peaks-Butterworth, option-2 depth intervals, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	CM	CCM
1 (0-99)	-	122	-	-	7	-	11	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-	38	50
2 (100-199)	55	112	113	39	74	39	88	78	145	42	19	76	-	-	-	-	83	-	37	21	-	-	68	69
3 (200-299)	106	57	71	121	87	79	111	105	68	59	128	104	88	89	52	67	73	73	83	55	39	41	80	80
4 (300-399)	234	-	82	133	117	135	101	92	120	131	159	110	128	130	129	54	80	66	58	99	55	72	109	112
5 (400-499)	-	-	-	-	208	217	113	114	172	-	65	-	-	-	178	109	29	-	-	91	101	121	127	153
6 (500-599)	-	-	-	-	-	-	112	-	606	63	-	-	-	-	6	137	149	156	284	82	55	86	158	187
7 (600-699)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	131	111	74	140	15	81	92	47	86	123
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	154	202	121	95	177	229	152	161	236
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	194	-	8	-	-	-	-	-	101	154
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 7e. No. of landings of Pacific cod, by horsepower class, by year, from Two Peaks-Butterworth, option-2 depth intervals, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	-	5	-	-	5	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	12
2 (100-199)	28	43	33	12	23	10	25	1	4	7	15	17	-	-	-	-	11	-	2	8	-	-	239
3 (200-299)	18	12	7	7	8	16	26	18	34	20	35	45	42	39	25	29	20	66	32	23	16	8	546
4 (300-399)	6	-	3	15	21	11	36	20	20	36	27	36	24	25	12	14	12	5	21	25	15	16	400
5 (400-499)	-	-	-	-	3	4	4	2	7	-	3	-	-	-	5	2	3	-	-	18	16	19	86
6 (500-599)	-	-	-	-	-	-	4	-	1	4	-	-	-	-	1	2	2	4	7	26	29	37	117
7 (600-699)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	28	17	8	1	8	4	3	82
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	19	39	19	17	22	30	166
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	3
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	52	60	43	34	60	41	96	41	67	67	80	98	66	64	57	95	86	122	82	125	102	113	1651

Table 8a. Rock sole landings(t), by horsepower class, by year, from Two Peaks-Butterworth, option-2 depth intervals, April-September, 1960-81.

	Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1	(0-99)	-	17	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25
2	(100-199)	108	352	220	1	131	4	85	-	65	3	2	6	-	-	-	-	19	-	7	1	-	-	1004
3	(200-299)	55	35	84	205	65	145	350	294	348	255	129	253	31	63	61	45	108	112	48	45	8	44	2783
4	(300-399)	171	125	-	247	149	10	141	225	269	475	63	344	59	3	19	14	24	-	48	30	42	45	2503
5	(400-499)	-	-	-	-	3	14	49	24	19	-	1	-	-	-	-	-	1	-	5	11	25	11	163
6	(500-599)	-	-	-	-	-	-	6	-	19	33	-	-	-	-	-	-	-	1	17	13	34	18	141
7	(600-699)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	49	39	13	7	2	-	-	134
8	(700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	106	65	48	92	33	19	10	373
9	(800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	(900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		334	529	304	453	348	173	639	543	720	766	195	603	90	66	104	214	256	174	224	135	128	128	7126

Table 8b. Rock sole effort(h), by horsepower class, by year, from Two Peaks-Butterworth, option-2 depth intervals, April-September, 1960-81.

	Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1	(0-99)	-	74	-	-	-	-	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	110
2	(100-199)	142	225	303	93	179	78	228	-	99	29	108	144	-	-	-	-	92	-	24	7	-	-	1751
3	(200-299)	126	14	47	191	235	270	277	160	675	434	423	754	406	378	227	229	449	784	227	391	116	295	7108
4	(300-399)	116	48	9	249	196	133	380	154	575	406	122	616	249	70	24	25	74	-	182	319	342	268	4557
5	(400-499)	-	-	-	-	35	44	70	45	41	-	14	-	-	-	-	-	106	-	23	79	215	145	817
6	(500-599)	-	-	-	-	-	-	50	-	35	61	-	-	-	-	-	-	-	56	46	269	239	497	1253
7	(600-699)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	128	247	181	135	10	42	22	40	805
8	(700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	257	185	758	150	291	145	160	1946
9	(800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	-	-	-	-	-	-	-	54
10	(900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		384	361	359	533	645	525	1041	359	1425	930	667	1514	655	448	433	758	1087	1733	662	1398	1079	1405	18401

Table 8c. Rock sole LPUE(kg/h), by horsepower class, by year, from Two Peaks-Butterworth, option-2 depth intervals, April-September, 1960-81.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1 (0-99)	–	231	–	–	–	–	227	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2 (100-199)	758	1564	726	14	733	49	373	–	661	88	15	42	–	–	–	–	206	–	276	208	–	–
3 (200-299)	437	2507	1786	1073	274	537	1265	1837	515	586	305	336	76	166	269	197	239	143	210	114	69	148
4 (300-399)	1472	2612	50	992	758	77	369	1462	467	1170	515	558	238	36	779	546	326	–	263	95	121	166
5 (400-499)	–	–	–	–	94	320	693	524	455	–	58	–	–	–	–	–	5	–	218	138	117	78
6 (500-599)	–	–	–	–	–	–	119	–	553	535	–	–	–	–	–	–	–	19	376	48	141	36
7 (600-699)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	186	197	215	96	663	50	20	3
8 (700-799)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	411	349	63	616	112	133	59
9 (800-899)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	–	–
10 (900+)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mean	870	1465	847	850	540	330	614	1513	505	824	292	398	137	147	240	282	236	100	338	97	119	91

Table 8d. Rock sole ALPUE, by horsepower class, by year, from Two Peaks-Butterworth, option-2 depth intervals, April-September, 1960-81.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	CM	CCM
1 (0-99)	–	16	–	–	–	–	37	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	27	15
2 (100-199)	87	107	86	2	136	15	61	–	131	11	5	11	–	–	–	–	87	–	82	214	–	–	74	92
3 (200-299)	50	171	211	126	51	163	206	121	102	71	104	84	55	113	112	70	101	143	62	118	58	163	112	112
4 (300-399)	169	178	6	117	140	22	60	97	92	142	176	140	174	24	325	194	138	–	78	98	102	182	126	165
5 (400-499)	–	–	–	–	17	97	113	35	90	–	20	–	–	–	–	–	2	–	64	142	98	86	69	74
6 (500-599)	–	–	–	–	–	–	19	–	110	65	–	–	–	–	–	–	–	19	111	49	118	40	66	94
7 (600-699)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	78	70	91	86	196	52	17	3	75	101
8 (700-799)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	146	148	63	182	115	112	65	119	164
9 (800-899)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	1	1
10 (900+)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Table 8e. No. of landings of rock sole, by horsepower class, by year, from Two Peaks-Butterworth, option-2 depth intervals, April-September, 1960-81.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	–	4	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5
2 (100-199)	19	28	26	4	14	7	16	–	7	2	5	1	–	–	–	–	8	–	3	2	–	–	151
3 (200-299)	7	1	2	7	10	14	24	20	41	29	27	36	21	22	17	11	21	41	14	18	12	16	411
4 (300-399)	9	4	1	13	18	8	22	17	37	22	11	25	13	4	3	2	4	–	11	20	19	11	274
5 (400-499)	–	–	–	–	2	3	3	2	4	–	1	–	–	–	–	–	2	–	1	8	19	6	51
6 (500-599)	–	–	–	–	–	–	2	–	2	3	–	–	–	–	–	–	–	2	5	12	11	12	49
7 (600-699)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	19	24	17	8	1	3	4	1	77
8 (700-799)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	21	13	25	10	9	9	13	100
9 (800-899)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	1
10 (900+)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	35	37	29	24	44	32	68	39	91	56	44	71	34	26	40	58	65	76	45	72	74	59	1119

Table 9a. English sole landings(t), by horsepower class, by year, from Two Peaks-Butterworth, option-2 depth intervals, April-September, 1960-81.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	-	22	6	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38
2 (100-199)	158	187	136	48	45	19	17	1	11	18	113	51	-	-	-	-	13	-	4	1	-	-	822
3 (200-299)	135	60	18	3	14	45	7	44	67	78	141	66	114	102	98	148	59	105	48	44	25	20	1441
4 (300-399)	8	-	9	24	28	11	28	44	52	97	66	43	67	50	12	44	36	27	32	45	20	44	707
5 (400-499)	-	-	-	-	3	4	5	6	18	-	5	-	-	-	45	5	40	-	-	7	32	141	311
6 (500-599)	-	-	-	-	-	-	-	-	-	11	-	-	-	-	6	28	45	33	31	108	90	145	497
7 (600-699)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	75	26	8	-	13	9	35	188
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	159	80	239	69	73	130	177	927
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	3	-	-	-	-	1	8
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	301	269	169	75	100	79	57	95	148	204	325	160	181	152	187	459	302	412	184	291	306	563	5019

Table 9b. English sole effort(h), by horsepower class, by year, from Two Peaks-Butterworth, option-2 depth intervals, April-September, 1960-81.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	-	87	47	-	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	169
2 (100-199)	308	662	476	238	202	174	153	15	54	81	431	280	-	-	-	-	144	-	28	19	-	-	3265
3 (200-299)	315	202	92	14	58	273	84	100	302	328	424	370	702	688	346	482	375	969	492	600	291	198	7705
4 (300-399)	51	-	39	167	212	68	258	103	200	302	231	254	316	222	59	102	138	120	265	458	174	315	4057
5 (400-499)	-	-	-	-	46	23	17	40	81	-	44	-	-	-	90	26	137	-	-	128	183	364	1179
6 (500-599)	-	-	-	-	-	-	-	-	2	55	-	-	-	-	34	18	59	84	150	616	608	918	2544
7 (600-699)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	171	262	181	145	1	98	76	40	974
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	322	152	1064	484	347	483	537	3389
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	-	10	-	-	-	-	6	70
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	674	951	654	419	553	538	512	258	639	766	1130	904	1018	910	754	1212	1196	2382	1420	2266	1818	2378	23352

Table 9c. English sole LPUE(kg/h), by horsepower class, by year, from Two Peaks-Butterworth, option-2 depth intervals, April-September, 1960-81.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1 (0-99)	-	252	117	-	292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 (100-199)	514	282	284	202	222	111	109	42	204	225	261	183	-	-	-	-	87	-	158	78	-	-
3 (200-299)	428	297	197	187	236	166	80	438	223	237	332	178	161	147	282	306	157	107	97	72	85	100
4 (300-399)	156	-	232	143	130	156	106	430	258	322	284	169	210	223	202	433	264	227	120	99	114	138
5 (400-499)	-	-	-	-	69	189	266	158	221	-	102	-	-	-	503	205	292	-	-	52	176	387
6 (500-599)	-	-	-	-	-	-	-	-	207	205	-	-	-	-	188	1541	762	390	208	175	148	157
7 (600-699)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	130	285	142	58	78	134	123	886
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	492	526	224	141	211	268	330
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	73	-	334	-	-	-	-	139
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mean	447	283	258	179	181	147	111	368	232	266	288	177	178	167	248	379	253	173	130	128	168	237

Table 9d. English sole ALPUE, by horsepower class, by year, from Two Peaks-Butterworth, option-2 depth intervals, April-September, 1960-81.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	CM	CCM
1 (0-99)	-	89	45	-	161	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	98	79
2 (100-199)	115	100	110	113	123	76	98	11	88	85	91	103	-	-	-	-	34	-	122	61	-	-	89	86
3 (200-299)	96	105	76	104	130	113	72	119	96	89	115	101	90	88	114	81	62	62	75	58	51	42	88	88
4 (300-399)	35	-	90	80	72	106	95	117	111	121	99	95	118	134	81	114	104	131	92	77	68	58	95	103
5 (400-499)	-	-	-	-	38	129	240	43	95	-	35	-	-	-	203	54	115	-	-	41	105	163	105	128
6 (500-599)	-	-	-	-	-	-	-	-	89	77	-	-	-	-	76	407	301	225	160	137	88	66	163	210
7 (600-699)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	75	52	34	80	105	73	374	104	174
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	130	208	129	108	165	160	139	144	225
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	-	132	-	-	-	-	59	73	111
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 9e. No. of landings of English sole, by horsepower class, by year, from Two Peaks-Butterworth, option-2 depth intervals, April-September, 1960-81.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	-	6	2	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
2 (100-199)	31	52	35	14	28	15	11	1	4	7	20	19	-	-	-	-	9	-	2	4	-	-	252
3 (200-299)	19	13	5	1	4	18	6	9	22	30	37	35	41	41	23	31	17	56	31	34	19	14	506
4 (300-399)	5	-	3	11	17	5	21	9	24	24	24	26	22	24	5	14	12	6	20	30	18	19	339
5 (400-499)	-	-	-	-	2	2	1	1	3	-	4	-	-	-	4	1	6	-	-	15	23	15	77
6 (500-599)	-	-	-	-	-	-	-	-	1	2	-	-	-	-	1	2	3	5	8	32	41	36	131
7 (600-699)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	26	17	8	1	7	5	1	78
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	10	40	22	17	34	30	175
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	1	4
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	55	71	45	26	56	40	39	20	54	63	85	80	63	65	47	96	76	115	84	139	140	116	1575

Table 10a. Pacific cod + rock sole + English sole landings(t), by horsepower class, by year, from Two Peaks-Butterworth, option-2 depth intervals, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	-	70	12	-	6	-	13	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	104
2 (100-199)	330	728	406	91	541	222	591	14	119	11	84	110	-	-	-	-	92	8	16	15	-	-	3378
3 (200-299)	414	130	121	382	455	790	1102	738	686	460	371	467	448	689	501	368	317	522	153	35	76	95	9320
4 (300-399)	312	127	22	530	841	558	891	508	528	1063	314	525	380	300	188	214	177	111	87	321	119	115	8231
5 (400-499)	-	-	-	-	246	252	152	90	180	-	5	-	-	-	276	40	83	-	10	116	156	245	1851
6 (500-599)	-	-	-	-	-	-	58	-	16	79	-	-	-	-	-	53	86	40	126	222	108	142	930
7 (600-699)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	272	300	187	54	8	63	29	37	950
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	695	393	353	114	336	416	356	2663
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	135	-	4	-	-	-	-	4	143
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1056	1055	561	1003	2089	1822	2807	1350	1532	1613	774	1102	828	989	1372	1670	1339	1088	514	1108	904	994	27570

Table 10b. Pacific cod + rock sole + English sole effort(h), by horsepower class, by year, from Two Peaks-Butterworth, option-2 depth intervals, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	-	119	27	-	14	-	36	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	206
2 (100-199)	304	732	346	208	348	248	511	15	200	28	247	216	-	-	-	-	179	47	44	58	-	-	3731
3 (200-299)	327	174	123	544	575	413	541	319	1061	594	575	893	472	518	337	345	463	749	273	58	163	222	8135
4 (300-399)	156	48	35	335	385	217	571	233	687	652	335	753	430	197	103	219	282	192	132	410	355	184	6877
5 (400-499)	-	-	-	-	58	67	70	45	147	-	14	-	-	-	104	36	170	-	23	97	221	259	1311
6 (500-599)	-	-	-	-	-	-	35	-	12	136	-	-	-	-	-	22	77	38	142	291	135	240	1128
7 (600-699)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	130	201	229	36	12	38	32	40	718
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	361	328	300	80	259	272	421	2021
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	-	10	-	-	-	-	8	72
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	787	1073	531	787	1077	944	1764	612	2117	1410	1171	1862	902	715	728	1184	1738	1362	706	1211	1178	1374	25233

Table 10c. Pacific cod + rock sole + English sole LPUE(kg/h), by horsepower class, by year, from Two Peaks-Butterworth, option-2 depth intervals, April-September, 1960-1981.

	Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1	(0-99)	-	586	437	-	446	-	365	-	262	-	-	-	-	-	-	-	-	-	-	-	-	-
2	(100-199)	1083	994	1174	436	1555	894	1155	947	593	397	340	511	-	-	-	-	513	164	363	252	-	-
3	(200-299)	1265	747	980	1566	1671	1918	2037	2312	646	773	644	522	948	1330	1487	1065	684	697	559	604	463	426
4	(300-399)	1999	2636	637	1581	2183	2569	1561	2179	768	1630	937	696	882	1522	1823	975	627	576	656	782	334	623
5	(400-499)	-	-	-	-	4243	3754	2171	1989	1226	-	391	-	-	-	2656	1103	490	-	429	1194	707	944
6	(500-599)	-	-	-	-	-	-	1645	-	1358	580	-	-	-	-	-	2403	1119	1046	884	763	802	590
7	(600-699)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2091	1493	817	1499	699	1661	893	928
8	(700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1926	1198	1177	1423	1297	1528	844
9	(800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2493	-	370	-	-	-	-	438
10	(900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mean		1342	983	1056	1274	1940	1930	1591	2206	724	1144	661	592	918	1383	1885	1410	770	799	728	915	767	723

Table 10d. Pacific cod + rock sole + English sole ALPUE, by horsepower class, by year, from Two Peaks-Butterworth, option-2 depth intervals, April-September, 1960-1981.

	Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	CM	CCM
1	(0-99)	-	60	41	-	23	-	23	-	36	-	-	-	-	-	-	-	-	-	-	-	-	-	37	37
2	(100-199)	81	101	111	34	80	46	73	43	82	35	51	86	-	-	-	-	67	21	50	28	-	-	62	61
3	(200-299)	94	76	93	123	86	99	128	105	89	68	97	88	103	96	79	76	89	87	77	66	60	59	88	88
4	(300-399)	149	268	60	124	113	133	98	99	106	142	142	118	96	110	97	69	81	72	90	85	44	86	108	111
5	(400-499)	-	-	-	-	219	195	136	90	169	-	59	-	-	-	141	78	64	-	59	130	92	131	120	128
6	(500-599)	-	-	-	-	-	-	103	-	188	51	-	-	-	-	-	170	145	131	121	83	105	82	118	122
7	(600-699)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	111	106	106	188	96	182	116	128	129	126
8	(700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	137	156	147	195	142	199	117	156	157
9	(800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	132	-	48	-	-	-	-	61	80	95
10	(900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 10e. No. of landings of Pacific cod + rock sole + English sole, by horsepower class, by year, from Two Peaks-Butterworth, option-2 depth intervals, April-September, 1960-1981.

	Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1	(0-99)	-	7	1	-	2	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	12
2	(100-199)	36	66	32	12	42	26	42	1	16	3	12	16	-	-	-	-	13	2	3	7	-	-	329
3	(200-299)	23	14	7	11	13	23	40	34	63	46	49	51	29	31	24	20	27	50	20	5	13	11	604
4	(300-399)	15	4	2	18	32	15	40	26	51	40	31	41	30	17	12	19	16	7	9	31	27	10	493
5	(400-499)	-	-	-	-	3	5	5	2	8	-	2	-	-	-	5	2	8	-	1	10	14	14	77
6	(500-599)	-	-	-	-	-	-	2	-	2	6	-	-	-	-	-	3	4	3	14	28	17	12	91
7	(600-699)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	19	15	3	2	5	4	1	63
8	(700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	24	19	11	14	20	22	135
9	(800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	2	5
10	(900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		74	91	42	41	92	69	128	63	141	95	94	108	59	48	56	89	109	84	60	100	95	72	1810

Table 11a. Pacific cod landings(t), by horsepower class, by year, from Horseshoe, option-2 depth intervals, April-September, 1960-81.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	-	-	-	-	-	-	5	-	2	-	-	-	-	-	-	-	2	-	-	-	-	-	9
2 (100-199)	98	12	9	114	359	380	245	205	45	5	1	5	10	29	-	-	3	-	-	6	-	-	1526
3 (200-299)	35	3	23	105	354	563	531	145	91	58	2	53	280	302	90	-	14	1	-	13	17	-	2680
4 (300-399)	96	-	39	237	418	580	845	195	99	79	1	52	220	481	105	145	112	91	264	241	220	129	4649
5 (400-499)	-	-	-	-	-	455	463	164	95	-	2	-	-	96	28	102	325	40	49	89	36	17	1961
6 (500-599)	-	-	-	-	-	-	117	-	119	50	21	1	-	84	157	183	13	-	-	200	311	8	1264
7 (600-699)	-	-	-	-	-	-	-	-	-	87	-	9	26	263	395	59	29	48	-	98	16	1	1031
8 (700-799)	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	6	66	13	56	93	43	21	300
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	271	72	20	-	10	95	108	-	576
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	39	-	-	54
Total	229	15	71	456	1131	1978	2206	709	451	281	27	120	536	1255	1046	567	599	193	379	874	751	176	14050

Table 11b. Pacific cod effort(h), by horsepower class, by year, from Horseshoe, option-2 depth intervals, April-September, 1960-81.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	-	-	-	-	-	-	8	-	10	-	-	-	-	-	-	-	10	-	-	-	-	-	28
2 (100-199)	354	112	54	146	381	451	180	370	213	78	46	30	18	32	-	-	6	-	-	20	-	-	2491
3 (200-299)	90	55	50	42	263	467	448	120	496	464	52	227	405	167	96	-	38	6	4	41	30	-	3561
4 (300-399)	156	33	87	176	152	461	560	116	367	378	81	107	199	299	122	307	167	157	436	283	477	297	5418
5 (400-499)	-	-	-	-	-	355	220	129	163	-	198	-	-	117	30	210	248	79	75	98	127	46	2097
6 (500-599)	-	-	-	-	-	-	62	-	130	128	28	11	-	93	139	202	22	-	-	190	372	21	1398
7 (600-699)	-	-	-	-	-	-	-	-	-	197	-	38	31	124	254	80	43	70	-	91	72	6	1006
8 (700-799)	-	-	-	-	-	-	-	-	-	25	-	-	-	-	-	3	143	70	72	121	73	41	548
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	188	73	34	-	13	106	59	-	473
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	-	-	34	-	-	53
Total	600	200	191	364	796	1734	1478	735	1381	1270	405	413	653	832	829	875	730	382	600	984	1210	411	17073

Table 11c. Pacific cod LPUE(kg/h), by horsepower class, by year, from Horseshoe, option-2 depth intervals, April-September, 1960-81.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1 (0-99)	-	-	-	-	-	-	578	-	219	-	-	-	-	-	-	-	186	-	-	-	-	-
2 (100-199)	276	104	158	777	943	843	1363	553	211	58	25	164	549	905	-	-	448	-	-	290	-	-
3 (200-299)	392	59	465	2497	1347	1205	1184	1210	182	125	37	235	690	1810	941	-	358	221	87	306	559	-
4 (300-399)	617	8	453	1344	2750	1257	1508	1682	268	209	18	488	1104	1609	864	473	671	578	604	850	460	433
5 (400-499)	-	-	-	-	-	1282	2105	1273	575	-	11	-	-	824	944	485	1310	504	651	906	279	366
6 (500-599)	-	-	-	-	-	-	1880	-	917	387	745	72	-	907	1130	904	595	-	-	1052	835	404
7 (600-699)	-	-	-	-	-	-	-	-	-	442	-	239	830	2122	1556	735	676	686	-	1078	226	169
8 (700-799)	-	-	-	-	-	-	-	-	-	93	-	-	-	-	-	2128	463	181	778	764	693	505
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1442	983	578	-	799	899	1827	-
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	808	-	-	1136	-	-
Mean	382	75	372	1253	1421	1141	1493	965	327	221	67	291	821	1508	1262	648	821	505	632	888	621	428

Table 11d. Pacific cod ALPUE, by horsepower class, by year, from Horseshoe, option-2 depth intervals, April-September, 1960-81.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	CM	CCM
1 (0-99)	-	-	-	-	-	-	39	-	67	-	-	-	-	-	-	-	23	-	-	-	-	-	43	51
2 (100-199)	72	139	42	62	66	74	91	57	65	26	37	56	67	60	-	-	55	-	-	33	-	-	63	137
3 (200-299)	103	79	125	199	95	106	79	125	56	57	55	81	84	120	75	-	44	44	14	34	90	-	83	119
4 (300-399)	162	11	122	107	194	110	101	174	82	95	27	168	134	107	68	73	82	114	96	96	74	101	104	104
5 (400-499)	-	-	-	-	-	112	141	132	176	-	16	-	-	55	75	75	160	100	103	102	45	86	98	111
6 (500-599)	-	-	-	-	-	-	126	-	280	175	1112	25	-	60	90	140	72	-	-	118	134	94	202	490
7 (600-699)	-	-	-	-	-	-	-	-	-	200	-	82	101	141	123	113	82	136	-	121	36	39	107	117
8 (700-799)	-	-	-	-	-	-	-	-	-	42	-	-	-	-	-	328	56	36	123	86	95	118	111	137
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	114	152	70	-	126	101	294	-	143	190
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	98	-	-	128	-	-	113	131

Table 11e. No. of landings of Pacific cod, by horsepower class, by year, from Horseshoe, option-2 depth intervals, April-September, 1960-81.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	3
2 (100-199)	14	7	4	8	22	24	16	20	10	4	1	2	1	3	-	-	1	-	-	1	-	-	138
3 (200-299)	5	2	4	4	11	18	22	7	20	14	3	12	15	12	6	-	2	1	1	6	2	-	167
4 (300-399)	5	1	3	10	10	18	22	10	15	13	2	8	12	16	12	17	12	8	20	20	30	19	283
5 (400-499)	-	-	-	-	-	8	8	5	5	-	2	-	-	2	1	7	13	6	5	7	7	5	81
6 (500-599)	-	-	-	-	-	-	2	-	3	4	1	1	-	3	5	10	2	-	-	11	27	2	71
7 (600-699)	-	-	-	-	-	-	-	-	-	5	-	1	2	5	11	5	3	5	-	4	1	1	43
8 (700-799)	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	8	4	6	7	9	3	39
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	3	2	-	2	7	4	-	24
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	2
Total	24	10	11	22	43	68	71	42	54	41	9	24	30	41	41	43	45	24	34	64	80	30	851

Table 12a. Pacific cod + ling cod + petrale sole landings(t), by horsepower class, by year, from Area 3C-N, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	168	105	79	129	85	-	39	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	638
2 (100-199)	52	119	114	161	77	216	404	237	174	83	152	404	322	392	326	255	171	103	38	-	7	8	3815
3 (200-299)	3	11	8	56	332	276	431	218	35	229	204	598	1061	258	231	232	76	17	84	169	269	169	4967
4 (300-399)	86	112	144	259	489	470	329	213	112	143	323	549	693	495	-	355	202	104	76	171	92	132	5549
5 (400-499)	-	-	-	-	-	-	-	-	-	-	40	125	89	35	260	126	120	95	233	290	33	85	1531
6 (500-599)	-	-	-	-	-	-	173	381	7	-	114	75	225	121	248	285	275	226	78	84	140	140	2572
7 (600-699)	-	-	-	-	-	-	-	-	-	-	14	379	493	119	274	198	119	1	37	121	78	99	1932
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	1	-	-	176	322	-	52	80	261	58	40	990
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	342	246	192	47	25	77	2	34	965
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	309	347	345	605	983	962	1376	1082	328	455	847	2131	2883	1420	1857	2019	1155	645	651	1173	679	707	22959

Table 12b. Pacific cod + ling cod + petrale sole effort(h), by horsepower class, by year, from Area 3C-N, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	458	221	289	251	138	-	98	56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1511
2 (100-199)	158	280	455	607	347	591	927	740	377	331	579	776	657	768	362	388	256	202	33	-	20	50	8904
3 (200-299)	16	38	14	146	581	547	825	508	92	636	652	1117	1987	366	561	566	239	55	207	340	535	422	10450
4 (300-399)	144	204	237	342	653	727	453	256	67	285	437	419	752	442	-	711	710	262	112	371	188	323	8095
5 (400-499)	-	-	-	-	1	-	-	-	-	-	125	204	71	82	354	178	179	285	435	548	72	202	2736
6 (500-599)	-	-	-	-	-	-	262	568	15	-	223	112	247	211	339	474	564	447	187	137	201	250	4237
7 (600-699)	-	-	-	-	-	-	-	-	-	-	42	578	690	186	245	345	395	11	145	215	141	290	3583
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	3	-	-	182	415	-	102	129	230	90	51	1202
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	278	154	179	77	28	99	9	60	884
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	776	743	995	1346	1720	1865	2565	2128	551	1252	2058	3209	4404	2055	2321	3231	2522	1441	1276	1940	1256	1648	41302

Table 12c. Pacific cod + ling cod + petrale sole LPUE(kg/h), by horsepower class, by year, from Area 3C-N, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1 (0-99)	367	474	271	513	617	-	401	581	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 (100-199)	330	426	250	265	221	366	435	320	460	249	262	521	489	509	901	657	666	511	1142	-	361	160
3 (200-299)	208	297	582	382	572	505	523	429	382	359	312	535	533	704	412	410	318	302	405	497	503	399
4 (300-399)	594	549	606	756	748	646	726	833	1664	503	738	1310	921	1119	-	498	284	396	680	460	490	410
5 (400-499)	-	-	-	-	294	-	-	-	-	-	316	612	1252	422	733	708	668	334	534	529	464	421
6 (500-599)	-	-	-	-	-	-	660	671	471	-	509	666	911	575	732	601	486	504	417	612	696	561
7 (600-699)	-	-	-	-	-	-	-	-	-	-	331	655	714	638	1118	575	301	133	254	561	550	342
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	381	-	-	965	775	-	509	616	1134	642	778
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1229	1598	1072	609	879	782	269	569
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mean	398	467	347	449	572	516	536	508	595	363	412	664	655	691	800	625	458	448	510	605	541	429

Table 12d. Pacific cod + ling cod + petrale sole ALPUE, by horsepower class, by year, from Area 3C-N, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	CM	CCM
1 (0-99)	92	101	78	114	108	-	75	114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	97	100
2 (100-199)	83	91	72	59	39	71	81	63	77	69	64	78	75	74	113	105	145	114	224	-	67	37	86	95
3 (200-299)	52	64	168	85	100	98	98	84	64	99	76	81	81	102	52	66	69	67	79	82	93	93	84	84
4 (300-399)	149	118	175	168	131	125	135	164	280	139	179	197	141	162	-	80	62	88	133	76	91	96	138	142
5 (400-499)	-	-	-	-	51	-	-	-	-	-	77	92	191	61	92	113	146	75	105	87	86	98	98	108
6 (500-599)	-	-	-	-	-	-	123	132	79	-	124	100	139	83	92	96	106	113	82	101	129	131	109	117
7 (600-699)	-	-	-	-	-	-	-	-	-	-	80	99	109	92	140	92	66	30	50	93	102	80	86	96
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	57	-	-	121	124	-	114	121	187	119	181	128	143
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	154	256	234	136	172	129	50	133	158	189
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 12e. No. of landings of Pacific cod + ling cod + petrale sole, by horsepower class, by year, from Area 3C-N, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	28	27	31	24	9	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	126
2 (100-199)	16	25	36	42	21	38	79	53	37	14	19	57	38	29	20	24	19	14	3	-	2	1	587
3 (200-299)	1	1	2	11	63	42	68	43	15	25	49	98	131	23	23	22	12	4	15	34	45	24	751
4 (300-399)	7	8	14	19	25	21	24	12	8	11	15	37	40	29	-	32	19	12	11	21	17	11	393
5 (400-499)	-	-	-	-	1	-	-	-	-	-	6	6	6	3	9	5	13	13	18	24	7	16	127
6 (500-599)	-	-	-	-	-	-	14	19	1	-	6	7	12	2	4	15	24	33	16	13	14	11	191
7 (600-699)	-	-	-	-	-	-	-	-	-	-	2	17	27	6	5	12	11	1	6	4	11	8	110
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	1	-	-	11	27	-	9	13	13	7	4	85
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9	7	6	6	6	1	5	49
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	52	61	83	96	119	101	188	131	61	50	97	223	254	92	81	146	105	92	88	115	104	80	2419

Table 13a. Pacific cod + ling cod + rock sole landings(t), by horsepower class, by year, from Area 5A, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	102	31	23	34	27	26	10	98	33	3	-	-	-	-	-	-	-	-	-	-	-	-	387
2 (100-199)	104	171	162	117	137	149	201	175	262	97	99	23	38	51	-	8	-	-	2	12	3	-	1811
3 (200-299)	32	14	68	10	90	69	407	172	544	253	227	179	131	44	3	33	28	5	45	18	79	13	2464
4 (300-399)	37	10	2	-	40	29	117	28	121	71	20	18	-	113	155	92	159	42	131	215	229	160	1789
5 (400-499)	-	-	-	-	-	-	-	-	2	-	8	17	52	50	42	147	115	119	121	238	153	103	1167
6 (500-599)	-	-	-	-	-	-	15	-	59	-	3	-	106	25	39	13	70	41	122	45	125	64	727
7 (600-699)	-	-	-	-	-	-	-	-	-	4	2	25	16	1	19	44	25	23	-	11	5	-	175
8 (700-799)	-	-	-	-	-	-	-	-	-	15	2	-	-	1	31	6	97	4	1	16	-	-	173
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	19	81	-	-	124
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	13	-	18	-	-	32
Total	275	226	255	161	294	273	750	473	1021	443	361	262	343	285	289	343	519	247	441	654	594	340	8849

Table 13b. Pacific cod + ling cod + rock sole effort(h), by horsepower class, by year, from Area 5A, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	294	68	102	162	72	36	32	222	76	26	-	-	-	-	-	-	-	-	-	-	-	-	1090
2 (100-199)	375	464	443	346	279	268	398	459	620	571	295	167	73	210	-	54	-	-	13	104	30	-	5169
3 (200-299)	133	27	243	50	234	209	617	309	1147	867	741	505	301	85	24	161	72	28	103	48	260	17	6181
4 (300-399)	125	22	4	-	90	39	196	54	259	439	64	39	-	158	214	169	275	113	307	548	587	528	4230
5 (400-499)	-	-	-	-	-	-	-	-	2	-	25	36	99	85	145	335	249	355	189	241	344	247	2352
6 (500-599)	-	-	-	-	-	-	10	-	100	-	6	-	136	42	96	20	130	94	185	60	215	111	1205
7 (600-699)	-	-	-	-	-	-	-	-	-	12	6	65	33	2	71	56	106	67	-	32	17	-	467
8 (700-799)	-	-	-	-	-	-	-	-	-	37	9	-	3	2	100	12	162	3	7	51	-	-	386
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	34	-	32	59	1	-	127
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	3	-	11	-	-	21
Total	927	581	792	558	675	552	1253	1044	2204	1952	1146	812	645	584	650	808	1035	663	836	1154	1454	903	21228

Table 13c. Pacific cod + ling cod + rock sole LPUE(kg/h), by horsepower class, by year, from Area 5A, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1 (0-99)	346	455	227	210	376	723	323	442	439	113	-	-	-	-	-	-	-	-	-	-	-	-
2 (100-199)	277	367	365	336	491	557	506	380	422	169	334	135	517	241	-	149	-	-	-	-	-	-
3 (200-299)	238	500	278	204	384	329	658	555	474	291	305	354	436	521	124	203	386	172	116	114	98	-
4 (300-399)	299	439	540	-	440	746	596	513	465	162	316	471	-	712	723	544	578	367	439	374	305	754
5 (400-499)	-	-	-	-	-	-	-	-	841	-	303	475	525	583	292	440	461	333	426	391	390	303
6 (500-599)	-	-	-	-	-	-	1474	-	590	-	484	-	778	596	402	628	539	440	642	989	444	415
7 (600-699)	-	-	-	-	-	-	-	-	-	366	290	391	482	352	269	786	239	337	659	755	580	572
8 (700-799)	-	-	-	-	-	-	-	-	-	407	216	-	158	430	314	536	600	1494	174	322	317	-
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	167	712	-	578	1378	460	-
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	203	4464	-	1677	-	-
Mean	297	389	322	289	436	495	599	453	463	227	315	323	532	488	445	425	501	373	528	567	409	377

Table 13d. Pacific cod + ling cod + rock sole ALPUE, by horsepower class, by year, from Area 5A, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	CM	CCM
1 (0-99)	116	117	70	73	86	146	54	98	95	50	-	-	-	-	-	-	-	-	-	-	-	-	91	61
2 (100-199)	93	94	113	116	113	113	84	84	91	74	106	42	97	49	-	35	-	-	22	20	24	-	76	53
3 (200-299)	80	129	86	71	88	66	110	123	102	128	97	110	82	107	28	48	77	46	83	66	75	200	91	88
4 (300-399)	101	113	168	-	101	151	99	113	100	71	100	146	-	146	162	128	115	98	81	69	95	80	112	121
5 (400-499)	-	-	-	-	-	-	-	-	182	-	96	147	99	119	66	104	92	89	122	174	109	110	116	116
6 (500-599)	-	-	-	-	-	-	246	-	127	-	154	-	146	122	90	148	108	118	125	133	142	152	139	141
7 (600-699)	-	-	-	-	-	-	-	-	-	161	92	121	91	72	60	185	48	90	-	62	78	-	96	100
8 (700-799)	-	-	-	-	-	-	-	-	-	179	69	-	30	88	71	126	120	401	33	57	-	-	117	135
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	142	-	109	243	112	-	129	121
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41	1197	-	296	-	-	511	603

Table 13e. No. of landings of Pacific cod + ling cod + rock sole, by horsepower class, by year, from Area 5A, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	22	5	8	15	4	3	2	19	5	2	-	-	-	-	-	-	-	-	-	-	-	-	85
2 (100-199)	26	44	37	32	30	27	45	62	75	41	29	19	4	13	-	2	-	-	2	2	1	-	491
3 (200-299)	5	3	14	3	13	19	48	30	83	56	57	42	19	4	1	13	5	2	5	3	9	1	435
4 (300-399)	5	3	1	-	5	5	16	4	21	19	6	4	-	5	11	22	26	14	29	33	49	48	326
5 (400-499)	-	-	-	-	-	-	-	-	1	-	4	3	4	4	5	7	15	16	7	13	21	16	116
6 (500-599)	-	-	-	-	-	-	1	-	4	-	2	-	4	2	3	5	6	4	6	7	12	4	60
7 (600-699)	-	-	-	-	-	-	-	-	-	2	1	1	3	1	2	3	3	5	-	1	3	-	25
8 (700-799)	-	-	-	-	-	-	-	-	-	2	2	-	1	1	1	3	3	1	2	3	-	-	19
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	-	2	8	1	-	15
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	3	-	-	5
Total	58	55	60	50	52	54	112	115	189	122	101	69	35	30	23	56	62	43	53	73	96	69	1577

Table 14a. Pacific cod + ling cod + rock sole landings(t), by horsepower class, by year, from Area 5B, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	16	22	26	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-	32	-	-	-	113
2 (100-199)	407	152	273	193	220	292	291	199	141	192	39	99	17	3	-	-	-	-	-	-	-	-	2518
3 (200-299)	138	141	115	22	25	90	93	49	140	79	44	149	136	-	-	-	-	-	6	26	-	24	1277
4 (300-399)	64	112	1	17	21	112	96	17	50	40	6	6	-	-	-	10	2	-	2	10	63	139	768
5 (400-499)	-	-	-	-	-	68	3	4	21	-	-	5	29	38	59	188	302	46	117	85	209	412	1586
6 (500-599)	-	-	-	-	-	-	27	3	-	6	-	1	33	64	20	105	63	13	45	20	45	54	499
7 (600-699)	-	-	-	-	-	-	-	-	-	-	5	4	32	72	15	174	114	11	-	6	15	-	448
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	3	63	21	1	126	93	7	18	74	52	14	472
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	15	124	10	37	17	221	3	428
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	20	115	23	-	167
Total	625	427	415	232	266	562	510	272	352	317	94	267	310	198	96	635	707	87	277	353	628	646	8276

Table 14b. Pacific cod + ling cod + rock sole effort(h), by horsepower class, by year, from Area 5B, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	56	92	64	-	-	-	-	-	-	2	-	-	-	-	-	30	-	-	136	-	-	-	380
2 (100-199)	942	505	687	599	450	498	532	356	409	567	147	311	44	18	-	-	-	-	-	2	-	-	6067
3 (200-299)	227	314	268	78	72	85	155	75	242	225	133	431	378	2	-	4	-	2	30	87	-	99	2907
4 (300-399)	146	266	13	29	46	142	84	32	69	138	24	37	-	-	-	21	8	-	14	30	169	301	1569
5 (400-499)	-	-	-	-	2	54	4	3	27	-	-	17	73	156	150	384	574	130	116	143	400	782	3015
6 (500-599)	-	-	-	-	-	-	27	2	-	20	-	7	67	50	36	176	116	30	53	47	29	86	746
7 (600-699)	-	-	-	-	-	-	-	-	-	-	25	17	95	107	42	329	285	37	-	9	23	-	969
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	5	70	42	7	172	189	14	27	170	101	29	826
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	23	204	20	54	50	318	2	675
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	-	20	142	39	-	228
Total	1371	1177	1032	706	570	779	802	468	747	952	329	825	727	375	239	1139	1403	233	450	680	1079	1299	17382

Table 14c. Pacific cod + ling cod + rock sole LPUE(kg/h), by horsepower class, by year, from Area 5B, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1 (0-99)	289	242	402	-	-	-	-	-	-	79	-	-	-	-	-	579	-	-	232	-	-	-
2 (100-199)	431	300	398	322	488	586	546	558	344	339	263	319	384	161	-	-	-	-	-	148	-	-
3 (200-299)	606	448	430	277	341	1061	602	655	579	349	329	345	359	27	-	103	-	233	202	296	-	244
4 (300-399)	437	421	65	570	448	787	1139	518	718	291	238	168	-	-	-	469	303	-	119	322	373	460
5 (400-499)	-	-	-	-	16	1258	833	1387	769	-	-	269	402	246	392	490	526	350	1010	581	523	526
6 (500-599)	-	-	-	-	-	-	1012	1634	-	278	-	162	489	1289	568	597	540	424	844	427	1546	629
7 (600-699)	-	-	-	-	-	-	-	-	-	-	197	244	338	674	368	529	399	300	-	688	652	-
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	640	900	493	212	733	492	511	649	433	519	466
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	147	645	607	515	680	348	696	1589
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	328	-	975	806	581	-
Mean	456	363	402	329	467	721	636	581	471	333	286	324	426	528	402	558	504	373	616	519	582	497

Table 14d. Pacific cod + ling cod + rock sole ALPUE, by horsepower class, by year, from Area 5B, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	CM	CCM
1 (0-99)	63	67	100	-	-	-	-	-	-	24	-	-	-	-	-	104	-	-	38	-	-	-	66	79
2 (100-199)	95	83	99	98	104	81	86	96	73	102	92	98	90	30	-	-	-	-	-	29	-	-	84	494
3 (200-299)	133	123	107	84	73	147	95	113	123	105	115	106	84	5	-	18	-	62	33	57	-	49	86	271
4 (300-399)	96	116	16	173	96	109	179	89	152	87	83	51	-	-	-	84	60	-	19	62	64	93	91	370
5 (400-499)	-	-	-	-	3	174	131	239	163	-	-	83	94	47	98	88	104	94	164	114	90	106	112	112
6 (500-599)	-	-	-	-	-	-	159	281	-	83	-	50	115	244	141	107	107	114	137	82	266	127	144	172
7 (600-699)	-	-	-	-	-	-	-	-	-	-	69	75	79	128	92	95	79	80	-	133	112	-	94	131
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	198	211	93	53	131	98	137	105	83	89	94	117	145
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	116	120	138	110	67	120	320	129	139
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65	-	158	155	100	-	120	114

Table 14e. No. of landings of Pacific cod + ling cod + rock sole, by horsepower class, by year, from Area 5B, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	7	4	3	-	-	-	-	-	-	1	-	-	-	-	-	2	-	-	2	-	-	-	19
2 (100-199)	52	25	40	44	40	30	34	30	25	25	7	12	2	3	-	-	-	-	-	1	-	-	370
3 (200-299)	12	13	13	2	6	7	18	7	14	14	15	26	20	1	-	1	-	1	3	2	-	4	179
4 (300-399)	7	6	3	4	4	9	9	5	9	8	2	7	-	-	-	3	2	-	3	4	14	25	124
5 (400-499)	-	-	-	-	1	1	1	2	4	-	-	2	4	7	6	17	22	20	9	11	29	38	174
6 (500-599)	-	-	-	-	-	-	2	1	-	3	-	3	3	4	3	10	8	3	6	3	4	9	62
7 (600-699)	-	-	-	-	-	-	-	-	-	-	2	2	5	4	2	14	12	5	-	2	4	-	52
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	1	4	2	1	7	8	2	4	8	8	3	48
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	8	1	7	7	19	1	47
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	1	7	3	-	14
Total	78	48	59	50	51	47	64	45	52	51	26	53	38	21	13	57	63	32	35	45	81	80	1089

Table 15a. Pacific cod + rock sole + English sole landings(t), by horsepower class, by year, from Area 5C, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	-	1	-	-	-	-	6	-	104	-	-	-	-	-	-	39	5	-	-	-	-	-	155
2 (100-199)	161	45	188	194	646	801	685	396	157	84	87	179	50	36	-	-	3	-	-	7	-	-	3719
3 (200-299)	100	29	108	157	332	933	1026	225	413	531	210	158	290	458	100	-	20	14	1	12	29	5	5151
4 (300-399)	210	1	38	346	648	708	1297	603	371	417	269	144	227	548	256	278	293	231	653	522	491	183	8734
5 (400-499)	-	-	-	-	-	573	720	198	143	-	27	3	-	167	163	187	404	141	89	171	58	31	3075
6 (500-599)	-	-	-	-	-	-	222	18	184	44	22	-	-	91	169	312	49	40	1	399	374	17	1942
7 (600-699)	-	-	-	-	-	-	-	-	-	215	33	-	27	287	475	98	36	76	-	71	35	16	1369
8 (700-799)	-	-	-	-	-	-	-	-	-	48	-	-	-	-	60	7	289	72	110	283	155	13	1037
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	267	81	38	3	14	95	128	-	626
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-	43	-	-	60
Total	471	76	334	697	1626	3015	3956	1440	1372	1339	648	484	594	1587	1490	1002	1154	577	868	1603	1270	265	25868

Table 15b. Pacific cod + rock sole + English sole effort(h), by horsepower class, by year, from Area 5C, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	-	6	-	-	-	-	8	-	209	-	-	-	-	-	-	92	20	-	-	-	-	-	335
2 (100-199)	328	103	270	264	539	851	551	545	285	272	272	470	120	44	-	2	6	-	-	20	-	-	4942
3 (200-299)	89	72	149	70	219	677	840	234	528	1314	501	478	390	438	100	-	70	67	8	39	41	12	6336
4 (300-399)	210	5	57	280	331	521	860	408	359	755	855	349	181	330	263	467	492	343	1082	619	869	367	10003
5 (400-499)	-	-	-	-	-	394	345	131	166	-	198	10	-	163	135	295	378	340	190	234	149	73	3201
6 (500-599)	-	-	-	-	-	-	112	20	117	103	28	-	-	97	148	379	89	72	6	366	366	28	1931
7 (600-699)	-	-	-	-	-	-	-	-	-	469	172	-	31	141	322	132	46	79	-	42	92	29	1555
8 (700-799)	-	-	-	-	-	-	-	-	-	110	-	-	-	-	56	4	168	83	115	236	422	26	1220
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	85	41	1	22	88	80	-	482
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	-	-	34	-	-	53
Total	627	186	476	614	1089	2443	2716	1338	1664	3023	2026	1307	722	1213	1189	1456	1329	985	1423	1678	2019	535	30058

Table 15c. Pacific cod + rock sole + English sole LPUE(kg/h), by horsepower class, by year, from Area 5C, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1 (0-99)	-	151	-	-	-	-	719	-	499	-	-	-	-	-	-	423	237	-	-	-	-	-
2 (100-199)	490	437	694	734	1198	941	1243	726	552	309	321	381	414	811	-	175	554	-	-	341	-	-
3 (200-299)	1129	397	725	2244	1514	1377	1221	961	781	404	419	330	744	1046	997	-	291	211	122	314	705	381
4 (300-399)	1002	159	662	1236	1957	1359	1507	1477	1032	552	314	412	1253	1659	971	594	595	672	603	842	564	498
5 (400-499)	-	-	-	-	-	1455	2086	1513	861	-	138	312	-	1026	1208	633	1069	415	470	731	387	427
6 (500-599)	-	-	-	-	-	-	1979	907	1573	423	802	-	-	935	1138	823	545	560	190	1088	1021	611
7 (600-699)	-	-	-	-	-	-	-	-	-	459	191	-	859	2036	1475	745	791	961	-	1692	384	541
8 (700-799)	-	-	-	-	-	-	-	-	-	440	-	-	-	-	1077	1746	1719	870	956	1197	367	502
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1618	950	919	2716	653	1082	1598	-
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	902	-	-	1256	-	-
Mean	751	409	702	1135	1493	1234	1457	1076	825	443	320	370	823	1308	1253	688	868	586	610	955	629	495

Table 15d. Pacific cod + rock sole + English sole ALPUE, by horsepower class, by year, from Area 5C, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	CM	CCM
1 (0-99)	-	37	-	-	-	-	49	-	60	-	-	-	-	-	-	61	27	-	-	-	-	-	47	63
2 (100-199)	65	107	99	65	80	76	85	67	67	70	100	103	50	62	-	25	64	-	-	36	-	-	72	80
3 (200-299)	150	97	103	198	101	112	84	89	95	91	131	89	90	80	80	-	34	36	20	33	112	77	91	95
4 (300-399)	133	39	94	109	131	110	103	137	125	125	98	111	152	127	77	86	69	115	99	88	90	101	105	105
5 (400-499)	-	-	-	-	-	118	143	141	104	-	43	84	-	78	96	92	123	71	77	77	62	86	93	98
6 (500-599)	-	-	-	-	-	-	136	84	191	95	251	-	-	71	91	120	63	96	31	114	162	123	116	122
7 (600-699)	-	-	-	-	-	-	-	-	-	104	60	-	104	156	118	108	91	164	-	177	61	109	114	121
8 (700-799)	-	-	-	-	-	-	-	-	-	99	-	-	-	-	86	254	198	148	157	125	58	101	136	159
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	129	138	106	463	107	113	254	-	187	210
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	-	-	132	-	-	118	158

Table 15e. No. of landings of Pacific cod + rock sole + English sole, by horsepower class, by year, from Area 5C, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	-	1	-	-	-	-	1	-	6	-	-	-	-	-	-	2	2	-	-	-	-	-	12
2 (100-199)	15	6	13	13	32	55	41	32	18	18	11	18	7	4	-	1	1	-	-	1	-	-	286
3 (200-299)	11	4	11	6	10	29	45	13	39	60	27	23	16	25	8	-	4	4	3	6	5	2	351
4 (300-399)	7	1	3	17	18	21	43	30	35	34	39	22	11	21	20	28	32	22	69	51	65	38	627
5 (400-499)	-	-	-	-	-	10	14	4	7	-	2	2	-	6	6	16	27	16	9	11	13	9	152
6 (500-599)	-	-	-	-	-	-	4	1	5	5	1	-	-	4	8	18	8	4	2	16	31	4	111
7 (600-699)	-	-	-	-	-	-	-	-	-	15	2	-	2	6	18	12	4	6	-	2	2	2	71
8 (700-799)	-	-	-	-	-	-	-	-	-	2	-	-	-	-	2	2	12	6	9	9	11	5	62
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	5	4	1	3	8	6	-	58
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	35
Total	33	12	27	36	60	115	148	80	110	134	82	65	36	66	70	84	95	59	95	105	133	60	1705

Table 16a. Pacific cod + rock sole + English sole landings(t), by horsepower class, by year, from Area 5D, qualification level = 80 %, April-September, 1960-1981.

	Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1	(0-99)	-	75	12	-	27	-	17	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	134
2	(100-199)	383	728	406	125	608	497	730	52	148	83	112	224	-	-	-	36	147	8	17	15	-	-	4319
3	(200-299)	414	130	121	413	455	1055	1458	852	1056	650	487	557	590	890	664	390	333	603	153	41	76	98	11486
4	(300-399)	312	128	22	542	889	727	1122	624	806	1217	385	545	414	409	670	478	333	319	232	476	309	414	11373
5	(400-499)	-	-	-	-	246	261	156	176	186	-	5	1	-	-	279	73	144	11	42	123	234	263	2200
6	(500-599)	-	-	-	-	-	-	58	-	30	80	-	-	-	-	10	88	109	66	127	234	237	146	1185
7	(600-699)	-	-	-	-	-	-	-	-	-	1	2	-	-	-	498	407	239	72	27	63	45	73	1427
8	(700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1036	524	516	186	570	458	394	3684
9	(800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	147	230	119	-	132	-	-	4	632
10	(900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
Total		1109	1061	561	1080	2225	2540	3541	1704	2229	2031	991	1327	1004	1299	2268	2738	1949	1595	916	1522	1359	1392	36441

Table 16b. Pacific cod + rock sole + English sole effort(h), by horsepower class, by year, from Area 5D, qualification level = 80 %, April-September, 1960-1981.

	Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1	(0-99)	-	145	27	-	41	-	52	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	275
2	(100-199)	383	734	347	224	471	486	629	60	268	168	341	479	-	-	-	49	262	47	49	66	-	-	5063
3	(200-299)	327	176	123	263	272	505	671	440	1449	913	822	1202	700	714	434	387	482	922	275	69	163	228	11537
4	(300-399)	156	57	35	345	423	300	768	290	1043	768	487	848	483	317	406	551	610	579	420	592	868	783	11129
5	(400-499)	-	-	-	-	58	78	77	101	152	-	14	4	-	-	107	74	240	48	91	112	394	306	1856
6	(500-599)	-	-	-	-	-	-	35	-	18	143	-	-	-	-	15	53	99	108	145	310	304	252	1482
7	(600-699)	-	-	-	-	-	-	-	-	-	8	11	-	-	-	254	328	290	63	39	42	56	67	1158
8	(700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	555	399	417	180	375	344	453	2723
9	(800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59	78	54	-	51	-	-	10	252
10	(900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	2
Total		866	1112	532	832	1265	1369	2232	891	2940	2000	1675	2533	1183	1031	1275	2075	2438	2184	1250	1566	2129	2099	35477

Table 16c. Pacific cod + rock sole + English sole LPUE(kg/h), by horsepower class, by year, from Area 5D, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
1 (0-99)	-	519	427	-	661	-	327	-	262	-	-	-	-	-	-	-	-	-	-	-	-	-
2 (100-199)	998	991	1171	997	1290	1023	1160	870	552	495	329	467	-	-	-	724	559	164	346	233	-	-
3 (200-299)	1265	739	967	1569	1671	2089	2172	1937	728	712	592	463	842	1247	1529	1007	691	653	555	593	463	429
4 (300-399)	1999	2244	697	1597	2101	2422	1460	2150	772	1585	791	642	857	1290	1650	867	546	551	551	804	352	538
5 (400-499)	-	-	-	-	4243	3342	2026	1744	1221	-	391	132	-	-	2607	988	600	223	466	1093	592	858
6 (500-599)	-	-	-	-	-	-	1645	-	1684	561	-	-	-	-	648	1661	1102	606	876	754	778	580
7 (600-699)	-	-	-	-	-	-	-	-	-	123	158	-	-	-	1960	1240	825	1139	687	1503	805	1094
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1866	1312	1236	1035	1520	1331	870
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2496	2947	2201	-	2591	-	-	374
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	396	-	-	-	-	-
Mean	1281	954	1055	1298	1759	1855	1586	1912	758	1016	592	524	849	1260	1779	1320	799	730	733	972	638	663

Table 16d. Pacific cod + rock sole + English sole ALPUE, by horsepower class, by year, from Area 5D, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	CM	CCM
1 (0-99)	-	54	41	-	38	-	21	-	35	-	-	-	-	-	-	-	-	-	-	-	-	-	38	38
2 (100-199)	78	104	111	43	73	55	73	46	73	49	56	89	-	-	-	55	70	22	47	24	-	-	63	66
3 (200-299)	99	77	93	121	95	113	137	101	96	70	100	88	99	99	86	76	86	89	76	61	73	65	91	100
4 (300-399)	156	235	60	121	119	131	92	112	102	156	134	123	101	102	93	66	68	75	75	83	56	80	106	106
5 (400-499)	-	-	-	-	241	180	128	91	161	-	66	25	-	-	147	75	75	31	64	112	93	129	108	124
6 (500-599)	-	-	-	-	-	-	104	-	222	55	-	-	-	-	36	126	138	83	120	78	122	87	106	144
7 (600-699)	-	-	-	-	-	-	-	-	-	12	27	-	-	-	110	94	103	156	94	155	126	165	104	147
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	141	164	169	141	156	209	131	159	241
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	140	223	275	-	353	-	-	56	209	304
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	-	-	-	-	-	50	78

Table 16e. No. of landings of Pacific cod + rock sole + English sole, by horsepower class, by year, from Area 5D, qualification level = 80 %, April-September, 1960-1981.

Hp class	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	Total
1 (0-99)	-	8	1	-	3	-	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	16
2 (100-199)	43	67	33	14	54	44	55	6	22	14	14	32	-	-	-	2	20	2	5	9	-	-	436
3 (200-299)	23	15	7	12	13	32	54	47	93	63	72	75	45	46	33	23	29	62	21	8	13	12	798
4 (300-399)	15	5	2	21	39	21	59	34	76	53	41	46	34	30	31	39	32	21	34	46	58	49	786
5 (400-499)	-	-	-	-	3	7	6	4	9	-	2	1	-	-	6	9	16	7	4	12	24	22	132
6 (500-599)	-	-	-	-	-	-	2	-	3	8	-	-	-	-	2	5	6	7	15	34	35	15	132
7 (600-699)	-	-	-	-	-	-	-	-	-	1	1	-	-	-	22	25	24	7	4	6	6	3	99
8 (700-799)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41	35	28	18	21	27	29	199
9 (800-899)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	6	-	2	-	-	3	16
10 (900+)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
Total	81	95	43	47	112	104	179	91	204	139	130	154	79	76	96	147	169	134	103	136	163	133	2615

Table 17. Landing statistics for Pacific cod from Two Peaks-Butterworth Ground, April-September 1960-81, using nominal and standardized effort.

Year	Effort (h)		Land. (t)	LPUE (kg/h)	
	Nom.	Stand.		Nom.	Stand.
1960	1374	942	744	541	790
61	1322	748	543	411	726
62	999	609	531	532	872
63	1577	1246	755	479	606
64	1292	1022	1773	1372	1735
65	1462	1177	2368	1620	2012
66	2177	1830	2492	1145	1362
67	745	664	852	1144	1283
68	2966	2580	946	319	367
69	1966	1865	707	360	379
1970	2198	1671	430	196	257
71	2669	2237	501	188	224
72	2175	1869	1181	543	632
73	1515	1257	1260	832	1002
74	1215	1374	1519	1250	1106
75	1988	2588	1672	841	646
76	2651	3085	1233	465	400
77	4029	5220	1848	461	356
78	2094	2553	603	288	236
79	4259	5393	2082	489	386
1980	3635	4832	1466	403	303
81	4154	6089	1156	278	190

Table 18. Landing statistics for Rock sole from Two Peaks-Butterworth Ground, April-September 1960-81, using nominal and standardized effort.

Year	Effort (h)		Land. (t)	LPUE (kg/h)	
	Nom.	Stand.		Nom.	Stand.
1960	963	703	466	484	663
61	648	374	590	910	1578
62	904	558	375	415	672
63	1468	1142	644	439	564
64	1106	910	412	373	453
65	970	807	219	226	271
66	1108	1787	872	414	488
67	531	474	627	1181	1323
68	2678	2339	1090	407	466
69	1993	1849	1181	593	639
1970	985	842	357	362	424
71	2109	1778	813	385	457
72	1522	1251	210	138	168
73	1355	1132	141	104	125
74	1099	1215	183	167	151
75	1886	2361	330	175	140
76	2287	2802	581	254	207
77	3510	4215	298	85	71
78	1545	1985	298	193	150
79	3884	4871	288	74	59
1980	2960	3951	272	92	69
81	3221	4353	246	76	57

Table 19. Landing statistics for English sole from Two Peaks-Butterworth Ground, April-September 1960-81, using nominal and standardized effort.

Year	Effort (h)		Land. (t)	LPUE (kg/h)	
	Nom.	Stand.		Nom.	Stand.
1960	1224	847	607	496	717
61	1331	754	389	292	516
62	1046	625	221	211	354
63	1499	1173	139	93	118
64	1192	9270	169	142	182
65	2047	1624	182	89	112
66	1803	1541	99	55	64
67	690	619	152	220	246
68	1541	1355	273	177	201
69	1230	1132	319	259	282
1970	1732	1330	509	294	383
71	1898	1491	266	140	178
72	1857	1553	250	135	161
73	1660	1364	360	217	264
74	1322	1480	293	222	198
75	1798	2343	632	352	270
76	2658	3371	471	177	140
77	3603	4691	601	167	128
78	2063	2627	275	133	105
79	3814	4929	426	112	86
1980	2918	3962	449	154	113
81	3706	5362	800	216	149